CHAPTER 4 **Mobility Element**

Introduction

Purpose and Scope

The Mobility Element provides a framework for a balanced, multi-modal transportation system for the movement of people and goods within the unincorporated areas of the County of San Diego. A balanced system uses multiple modes of travel including motor vehicles, public transportation, bicycles, pedestrians, and to a lesser extent, rail and air transportation. While the automobile is the predominant mode of travel in the unincorporated County due largely to its rural character, opportunities for increased mode choice are addressed in this Element.

Interstate 8, east of Alpine

With the exception of State roads and highways, the County is responsible for the operation and maintenance of the public roadway system in unincorporated areas of the County along with the operation of eight public aviation facilities. The San Diego Association of Governments (SANDAG) serves as the regional planning agency for the entire County and is a key partner to the County along with other State, regional, and public agencies, in planning and funding roadways and other components of the transportation network within the County.

The Mobility Element includes several components including a description of the County's transportation network, the goals and policies that address for the safe and efficient operation, maintenance, and management of the transportation network, and the Mobility Element Network Appendix, which depicts in map and matrix format the location of road network components. The goals and policies strive for a balanced multimodal transportation system with adequate capacity to support the land uses and development pattern in the Land Use Element of this General Plan.

The Mobility Element identifies the ultimate road network, much of which currently exists, to be developed in the unincorporated County during the implementation of this General Plan so that future rights-of-way can be preserved for future roadway purposes. This network includes County and State roads that form the backbone of a regional network providing movement within and between communities in the unincorporated County. Interstate highways, as with State roads and highways, are managed and maintained by the California Department of Transportation (Caltrans). While the Mobility Element network map indicates some roadways within city boundaries, the County has no jurisdiction over roads in these cities. When applicable, the Mobility Element road network has been coordinated with adjacent cities to ensure consistency to the extent feasible.

Guiding Principles for Mobility

The Mobility Element's goals and policies are based on and reflective of a number of the Guiding Principles for the General Plan introduced in Chapter 2. A central theme is support for a multi-modal transportation network that enhances connectivity and supports existing development patterns while maintaining environmental sustainability by reducing gasoline consumption and greenhouse gas emissions.

The Mobility Element strives to maximize traffic movement and enhance connectivity by creating multiple connections between existing and planned retail or employment centers and residential communities and between different areas within communities. A continuous network where roads have enhanced connectivity facilitates the provision of optional routes of travel. This enables commuters to avoid areas when roads are congested or closed. In addition, a network with enhanced connectivity provides multiple evacuation routes during emergencies, such as wildfires. The Mobility Element incorporates road types that are compatible with surrounding land uses and reinforce the positive aspects of a community's character, contributing to the economic and social development of the community.

Road in Alpine

Bus service to Tecate

Biking at William Heise County Park in Julian

An important component of reducing greenhouse gas emissions is through reducing vehicle miles traveled. A well-connected road network will result in less vehicle miles traveled. The Mobility Element also encourages alternative modes of travel, such as riding public transportation, bicycling, and walking; along with minimizing single occupancy vehicular travel through carpooling, vanpooling, and other transportation demand management methods.

The Mobility Element strives to minimize the need to widen existing roads by maximizing the performance of the existing network and the use of alternative modes of travel. Requiring new development to pay their fair share of road and related infrastructure costs minimizes public costs while ensuring the infrastructure is available to support the increased demand for services.

Relationship to Other General Plan Elements

As mandated by State law, the Mobility Element must be consistent with all other elements of the General Plan and is related to these elements as discussed in the following section.

- *Land Use Element.* The Mobility Element is directly correlated to the Land Use Element this includes the identification of a road network that can adequately support the uses designated in the Land Use Map at build-out, based on a reasonable expectation for funding of the regional transportation network. The capacity required for the Mobility Element road network is based on the average number of daily vehicle trips that would be generated with build-out of the Land Use Map. The Mobility Element framework of road types relates to the varying characteristics of communities. The Land Use Element addresses non-transportation infrastructure components such as water, sewage, storm drainage, and communications; many of which are located within the right-of-way of the road network.
- *Noise Element.* This element addresses noise generated by motorized traffic on roadways, rail lines, and at airports. Also, the Noise Element identifies noise level contours and determines their compatibility with each land use type.
- *Conservation and Open Space Element*. This element provides measures for the preservation, conservation, development, and use of natural resources. The element addresses the air quality impacts from motor vehicular traffic, along with the impacts to environmentally sensitive habitats from road construction or improvements. In addition, the Mobility Element identifies the regional trail network that enhances accessibility to and recreational opportunities for the County park and open space network.
- *Safety Element.* Emergency ingress and egress routes are addressed in both the Mobility and Safety Elements. The Safety Element further establishes land use compatibility policies for areas located within the vicinity of airports.

Goals and Policies for Mobility Element

County Road Network

CONTEXT

In the unincorporated County, the road network is by far the most dominant component of the County's transportation system. Although motorists are the primary users of the system, bicyclists, pedestrians, and in some instances equestrians rely on the network for mobility within the unincorporated County as well as the larger San Diego region. State highways and regional arterials in the unincorporated County are part of an extensive regional network which includes an interstate highway system that provides intra- and interregional travel within and through the unincorporated County as described below.

- Traffic from Orange County enters the County along Interstate 5 through Marine Corps Base Camp Pendleton and travels to the coastal cities.
- Traffic from Riverside County travels into the unincorporated County along Interstate 15 and State Route 79, through the Rainbow Community Planning Area and North Mountain Subregion, respectively.
- Traffic from Imperial County enters the County along Interstate 8 through the Mountain Empire Subregion and along State Routes 78 and S22 through the Desert Subregion.

- Traffic from Baja California, Mexico enters the unincorporated County through the Tecate Port of Entry in Tecate, U.S.A. in the Mountain Empire Subregion.

COUNTY ROAD SYSTEM

With the exception of State maintained highways and roads, the County is responsible for the maintenance of the public road network in the unincorporated areas, including associated bicycle and pedestrian facilities. The three primary types of roads under the purview of the County are as follows:

- *Mobility Element roads* are County-maintained roads shown on the Mobility Element map and adopted in the General Plan. They provide for the movement of people and goods between and within communities in the County. The Mobility Element displays these roads showing both the road classification and its general alignment.
- *Local public roads* are County-maintained roads that feed traffic onto Mobility Element roads. These roads are not adopted in the General Plan; therefore deviations from planned networks do not require a general plan amendment.
- *Private roads*, along with their right of way, are not maintained by the County and generally are not available for general public use.

Mobility Element road

Via de Fortuna Road, a San Dieguito local public road

Yellow Brick Road, a private road in Valley Center

Transportation and land use are two important and related components of every community that help establish its character and function. Land use decisions take into account the road network when assessing the physical characteristics of the site along with resulting traffic impacts. Road design should minimize impacts to land use by including elements and features that accommodate community needs and reflect the character of the area. For example, the design of a four-lane road in an urbanized commercial center would differ from a four-lane road in a sparsely developed rural area. Functional road classifications are correlated to the Regional Categories identified in the Land Use Element.

While well designed roads respond to land use characteristics, a second major objective of the Mobility Element is to develop roads that are multi-modal and can safely accommodate vehicular, as well as transit, bicycle, and pedestrian modes of travel. The San Diego County Public Road Standards and supplemental manuals provide guidance for the road designs, along with including bus stops and bicycle and pedestrian facilities into the road right-of-way.

COUNTY ROAD OPERATIONS AND NETWORK

The backbone of the County's road network is referred to as the Mobility Element network, which includes both State highways and County roads. However, the goals and policies for roadways apply to all roads, public and private, unless otherwise stated.

The Mobility Element road network is based on a combination of community input and SANDAG traffic model forecasts based on full build-out of the General Plan land use map. Exceptions coordinated with community input is used when physical and other constraints precluded widening roads that resulted in an unacceptable level of service according to the SANDAG traffic model forecasts. The SANDAG traffic model used 2030 projections for build-out of the regional (freeways, state highways, and transit facilities) transportation network and the road networks and land use for incorporated jurisdictions.

The road network identified by the Mobility Element, included in the Mobility Element Network Appendix, is depicted on community level maps showing the road classification series and the general route of each road. Freeways, although shown on these maps, are included only for reference, as Mobility Element roads include State highways, but not freeways. The maps are accompanied by a matrix that identifies the road segment, its classification, any necessary improvements (such as a raised median, continuous or intermittent turn lanes, passing lanes, reduced shoulder width, or increased right-of-way requirements), and special circumstances including when it is deemed acceptable for a specific road segment to operate at a level of service E or F. Further explanation regarding the operating levels of service for each road segment is provided in the Background Material Section at the end of this chapter, along with specific exceptions to the established levels of service.

ROAD CLASSIFICATIONS

Rural residential street with parking

The County's road classifications are specific to roads operated and maintained by the County, and may be different from roads in other jurisdictions. The County's classification system is arranged by road type in a hierarchy that begins with roads that provide the greatest capacity (six-lane roads) to those that provide the least capacity (two-lane roads). The greater the road capacity, the more vehicles can travel on the roadway at an acceptable level of service. Table M-1a (Road Classifications: Six- and Four-Lane Roads) and Table M-1b (Road Classifications: Two-Lane Roads) provide a description for each classification, the number of travel lanes, and both the minimum right-of-way requirements and the right-of-way requirements when bicycle lanes are provided. The County's Public Road Standards provide additional criteria for these road types, such as design speed and threshold capacity.

These road classifications are specific to County Mobility Element roads, and although another jurisdiction may have a similar classification, the design criteria and standards are not necessarily the same. In addition,

although State highways are included in the Mobility Element road network, the cross-section and right-of-way requirements for State highways may be different than those of Mobility Element road classifications.

Table M-1a Road Classifications: Six- and Four-Lane Roads

No.	Road Classification	Description	Typical ROW Range* (Feet)	Lanes
SIX LANE ROAD SERIES Roads that accommodate high speed, high volume traffic and should be located away from Villages and in areas with limited physical constraints. The median serves as a separation between travel ways, as opposed to an area for turning or entering adjacent property.				
6.1	Expressway	A divided roadway with a wide median and grade separated interchanges. Road type has a capacity of 86,000 ADT (or more depending upon the number of lanes).	146–160	6 or more
6.2	Prime Arterial	A divided roadway with a median and at-grade interchanges. Capacity for road type is 50,000 ADT.	122–136	6
MAJOR ROAD SERIES A roadway that primarily serves medium to high volume traffic. Because of its high design speed, this road should typically be located in physically unconstrained areas and its use in Villages should be limited to industrial or heavy commercial areas with low levels of pedestrian and bicycle traffic. In some circumstances, an exception can be made for using a modified design speed of 45 mph.				
4.1A	Major Road with Raised Median	Appropriate for regional travel between communities where higher traffic volumes are forecast.	98–112	4
4.1B	Major Road with Intermittent Turn Lanes	Typically used in areas where turning movements are infrequent or where ROW is limited.	84–112	
BOULEVARD SERIES A roadway with a lower design speed and a wider parkway that should be used in Villages or similar locations where higher traffic volumes are combined with on-street parking, pedestrian, bicycle, and transit activities. The Boulevard Series can also be used in rural areas that are constrained by steep slopes or where the community requests a context sensitive solution that minimizes cut, fill, and grading requirements.				
4.2A	Boulevard with Raised Median	Increased road capacity and access control by providing a separation between travel lanes and dedicated turn lanes, along with a wide parkway to accommodate non-motorized circulation.	106–120	4
4.2B	Boulevard with Intermittent Turn Lane	Typically used where turning movements are infrequent or where ROW is limited.	92–120	

* Range reflects ROW requirement both with and without the provision of bicycle lanes, in accordance with the Bicycle Transportation Plan. The provision of pathways identified in the Community Trails Master Plan would require additional ROW.

Table M-1b Road Classifications: Two-Lane Roads

No.	Road Classification	Description	Typical ROW Range* (Feet)	Lanes
		COMMUNITY COLLECTOR SERIES		
		Roadway with higher design speeds that is appropriate for areas with few physical constraints and minimal pedestrian, bicycle, or other non-motorized traffic. Road type for use where physical constraints are limited.		
2.1A	Community Collector with Raised Median	The raised median provides more capacity, controls turn movements, and improves flow.	74–86	2
2.1B	Community Collector with Continuous Turn Lane	The continuous turn lane improves traffic flow in areas with multiple driveways and left-turn access requirements.	74–86	
2.1C	Community Collector with Intermittent Turn Lane	Intermittent turn lanes provide more capacity over a normal two-lane road and improve traffic flow.	60–86	
2.1D	Community Collector with Improvement Options	Road type with wider right-of-way for added flexibility to accommodate improvement options such as turn lanes, medians, or passing lanes.	84–96	
2.1E	Community Collector	Roadway with no improvement options. It accommodates low to medium traffic volumes in areas where turning movements are infrequent and where non-motorized traffic is limited.	60–72	
		LIGHT COLLECTOR SERIES		
		Roads with a lower design speed and wider parkway than the Community Collector. They can be used in rural areas with medium physical constraints or in urbanized areas with moderate levels of non-motorized circulation.		
2.2A	Light Collector with Raised Median	The median provides a separation between travel lanes; controls turn movements, and improves traffic flow.	78–90	2
2.2B	Light Collector with Continuous Turn Lane	Continuous turn lane improves traffic flow in areas with multiple driveways and left-turn access requirements.	78–90	
2.2C	Light Collector with Intermittent Turn Lanes	Dedicated intermittent turn lanes provide more capacity and improve traffic flow.	64–90	
2.2D	Light Collector with Improvement Options	Has a wider right-of-way for added flexibility to accommodate improvement options such as turn lanes, medians, or passing lanes.	88–100	
2.2E	Light Collector	Roadway has no special features and accommodates low to medium traffic volumes where turning movements are infrequent and where non-motorized traffic and physical constraints are limited.	64–76	
2.2F	Light Collector with Reduced Shoulder	Roadway with two-foot shoulder, a rolled curb with graded pathway, and a narrow right-of-way. In some instances the shoulder can be widened to six feet to serve as a bicycle lane.	52–60	

Table M-1b Road Classifications: Two-Lane Roads

No.	Road Classification	Description	Typical ROW Range* (Feet)	Lanes
MINOR COLLECTOR SERIES Roadway with a low design speed that is appropriate for highly constrained rural areas and for areas within a Village with heavy pedestrian, bicycle, and transit activities. This standard could also be used in semi-rural areas with high levels of "side friction" or access from adjacent parcels. Minor Collectors have a wide parkway that, in rural areas, can be used to grade slopes and improve visibility or moderate tight curves. In more urbanized areas, the wide parkway can be used for pedestrian and bicycle paths and for landscape buffers between vehicular and non-vehicular circulation.				
2.3A	Minor Collector with Raised Median	Raised median with dedicated turn lanes and controlled turning movements that improve traffic flow and enhance community character when the median is landscaped.	82–94	2
2.3B	Minor Collector with Intermittent Turn Lane	Improves traffic flow in areas with multiple driveways and left-turn access requirements.	68–82	
2.3C	Minor Collector	No additional features and is primarily intended for residential neighborhoods or for rural areas with steep slopes and physical constraints.	68–80	

* Range reflects ROW requirement both with and without the provision of bicycle lanes, in accordance with the Bicycle Transportation Plan. The provision of pathways identified in the Community Trails Master Plan would require additional ROW.

Local public roads provide important system connectivity and continuity for the road network designated by the Mobility Element by providing access to local residential neighborhoods and commercial and industrial areas. They support local traffic at a lower design speed and accommodate traffic volumes up to 4,500 average daily trips. The County Public Road Standards establish the local public road classifications and specify the associated range of improvements.

Local public roads are not included in the Mobility Element network. Local public roads are depicted with the network for informational purposes when they provide continuity between two Mobility Element roads, especially when those that would operate at an unacceptable level of service without the local public roads. Local public roads are also depicted in areas that are currently undeveloped but planned as a future development area. Right-of-way should be reserved for these roads for local ingress/egress until subsequent planning efforts in the area determine specific locations of the local public road network. The basic criteria for depicting local public roads in the Mobility Element are provided in the County's Local Public Road Standards.

LOCATION GUIDE

A Road Classification Location guide that expresses the suitability of a road classification based upon its correlation to the County's Regional Categories is provided as Table M-2 (Road Classification Suitability). As shown in this table, road classifications with lower design speeds are recommended for Villages and for Semi-Rural or Rural Lands with physical constraints. Classifications of roads should consider the predominant topography or land use patterns, and a change in road classification should occur only at road intersections or another easily identifiable location in the network.

Rural roadway road

Residential street in the Valle de Oro community

Table M-2 Road Classification Suitability

Lanes	Village	Semi-Rural	Rural Lands
6	Limited use only: 6.1 Expressway or 6.2 Prime Arterial	6.1 Expressway or 6.2 Prime Arterial	6.1 Expressway or 6.2 Prime Arterial
4	Primary Suitability: 4.2 Boulevard Limited use only: 4.1 Major Road	Primary Suitability: 4.1 Major Road Limited use only: 4.2 Boulevard	Primary Suitability: 4.1 Major Road Areas with Physical Constraints: 4.2 Boulevard
2	Primary Suitability: 2.3 Minor Collector Secondary Suitability: 2.2 Light Collector Limited use only: 2.1 Community Collector	Primary Suitability: 2.2 Light Collector Secondary Suitability: 2.1 Community Collector Limited use only: 2.3 Minor Collector	Primary Suitability: 2.1 Community Collector Areas with Physical Constraints: 2.2 Light Collector or 2.3 Minor Collector

At build-out of both the General Plan Land Use plan and designated road network, it is estimated that the road network will not meet the desired level of service standard (LOS D) on approximately 10 percent of all county roads and State highways. A lower LOS was deemed acceptable only under special circumstances based on specific criteria as described in Table M-3 (Criteria for Accepting Level of Service E/F Roads) (refer to Policy M-2.1).

ROAD NETWORK

State law requires jurisdictions to develop a network that accommodates the land uses proposed in the General Plan. A portion of the Mobility Element road network depicted in the Mobility Element Network Appendix is currently in place, and the remainder will need to be constructed as development proceeds. The network will be constructed by new development as a condition of project approval and/or mitigation for project traffic-related impacts, by County capital improvement projects funded by the Transportation Impact Fee (TIF) Program or other local funding, and by State or federal funds whenever available. The primary objectives identified below form the basis for the network.

- *Efficient and effective movement of people and goods*—A primary goal of the Mobility Element is a road network that accommodates build-out of the land use map while operating with in acceptable levels of congestion. The policies in this General Plan address the need to relieve traffic congestion by balancing the consideration of road capacity and connectivity with the accommodation of alternate modes of travel and the use of transportation demand management methods. A highly connected road network reduces the overall vehicle miles traveled and allows for a greater dispersion of the traffic.
- *Accommodate all users of the road right-of-way*—The Mobility Element also supports the concept of complete streets that are designed and operated to enable safe access for all users and for all modes of travel including bicyclists, pedestrians, and transit riders. This includes users of all ages and abilities such as the elderly, children, and people with disabilities.
- *Right-of-way and roads provided by development*—Proposed development within or adjacent to the alignment of a road shown on the Mobility Element map will require coordination with the County to determine the extent to which property needs to be reserved for the alignment and the extent of property owner responsibility for construction of the roadway. An assessment of the need for coordinating the project development with the roadway, potential dedication of property, and/or acquisition of property will be discussed with the property owner. The County may, depending upon the specific circumstances, require dedication of the full width of the right-of-way for designated corridors.
- *The provision of a road network balanced with other General Plan goals*—While providing for mobility is a primary goal, specific road improvements need to also consider factors such as the protection of environmental resources, the reduction of noise impacts, the development of livable communities, land use compatibility issues related to health risks from air pollution, and the effective allocation of limited County resources. New or expanded road alignments should avoid environmental constraints such as floodplains and steep slopes. Noise impacts from roads vary depending on the type of vehicle and volume of traffic. To limit noise mitigation requirements, high volume roadways should be located away from residential areas and sensitive noise receptors (such as schools) or should include noise mitigating factors in their design.
- *Road design, operation, and maintenance that reflects community character*—Transportation and land use are two related components of every community that help establish its character and function. Just as land use decisions take into account the road network, road design should include components and features that serve community needs and reflect the character of the surrounding area. Proper road design should accommodate both motorized and non-motorized users of the road and respond to both travel demands and the character of the place (neighborhood, village, open space, etc.) that the road traverses.

GOALS AND POLICIES

GOAL M-1

Balanced Road Network. A safe and efficient road network that balances regional travel needs with the travel requirements and preferences of local communities.

Policies

M 1.1 **Prioritized Travel within Community Planning Areas.** Provide a public road network with a priority to accommodate travel between and within community planning areas rather than overflow traffic from State highways and freeways that are unable to meet regional travel demands.

M 1.2 **Interconnected Road Network.** Provide an interconnected public road network with multiple connections that improve efficiency by incorporating shorter routes between trip origin and destination, disperse traffic, reduce traffic congestion in specific areas, and provide both primary and secondary access/egress routes that support emergency services during fire and other emergencies.

M 1.3 **Peripheral Location for High-Volume Roadways.** Locate new State freeways, and high-volume regional arterials and Mobility Element roads at the periphery of areas planned for intense residential or commercial development to reduce noise, air, and visual impacts as well as land acquisition costs. To reduce adverse impacts and costs, consider narrower rights-of-way and lower design speeds in areas planned for substantial development.

GOAL M-2

Responding to Physical Constraints and Preservation Goals. A road network that provides adequate capacity to reasonably accommodate both planned land uses and regional traffic patterns, while supporting other General Plan goals such as providing environmental protections and enhancing community character.

Policies

M-2.1 **Level of Service Criteria.** Require a level of service of "D" or higher on all Mobility Element roads except for those where a failing level of service is deemed acceptable by the County when any criteria specifically identified in Table M-3 (Criteria for Accepting Level of Service E/F Roads) is met.

Refer to the background material Appendix M3 (Roads Where a Lower Level of Service is Deemed Acceptable) at the end of this chapter for list of road segments accepted to operate at LOS E/F.

M-2.2 **Access to Mobility Element Designated Roads.** Minimize direct access points to Mobility Element roads from driveways and other non-through roads to maintain the capacity and improve traffic operations.

M-2.3 **Environmentally Sensitive Road Design.** Locate and design public and private roads to minimize impacts to significant environmental and visual resources, while balancing construction costs. Avoid road alignments through floodplains to minimize impacts on floodplain habitats and limit costs for constructing flood control measures.

M-2.4 **Roadway Noise Buffers.** Incorporate buffers or other noise reduction measures consistent with standards established in the Noise Element into the siting and design of roads located next to sensitive noise-receptors to minimize adverse impacts from traffic.

Table M-3 Criteria for Accepting Level of Service E/F Roads

	Constraints	Criteria	Possible Options
Town Centers	■ Construction Costs ■ Established Land Development Patterns	Within established or planned town center Community willing to accept a lower LOS Improvements would require removing a significant number of existing businesses or residences	Bypass roads when feasible Alternate routes for local residents Couplets to improve traffic flow Operational improvements Land use modifications, where feasible
Regional Connectivity	■ Construction Costs ■ Environmental Impacts ■ Established Land Development	Connects major interregional corridors Provides alternate routes to interregional corridors with failing LOS Improvements to increase capacity attract additional overflow traffic from interregional corridors and still produce failing LOS Improvements would have substantial impacts on environmental resources Community willing to accept a lower LOS	Region-wide solutions to housing and traffic problems Improvements to Interstate-15 and regional arterials Wider ROW along routes that parallel I-15 and if needed to minimize impacts to local roads
Marginal Deficiencies	■ Environmental Impacts ■ Construction Costs ■ Established Land Development	Only a short segment of the road fails Underutilized, alternate routes exist	Operational improvements Traffic monitoring every 5–10 years Reclassify two-lane roads to retain wider ROW Operational improvements
Environmental Constraints	■ Construction Costs ■ Environmental Impacts	Proposed alignment or widening would impact significant Tier I habitat, MSCP preserves, historic landmarks, wetlands, or significant archaeological sites Located in area with steep slopes that would require excessive grading Improvements would substantially impact major public facilities (reservoirs, power lines, etc.) Community willing to accept a lower LOS	Land use modifications Alternate routes Road classification that maximizes road capacity within the ROW Operational improvements

M-2.5 **Minimize Excess Water Runoff.** Require road improvements to be designed and constructed to accommodate stormwater in a manner that minimizes demands upon engineered stormwater systems and to maximize the use of natural detention and infiltration techniques to mitigate environmental impacts.

GOAL M-3

Transportation Facility Development. New or expanded transportation facilities that are phased with and equitably funded by the development that necessitates their construction.

Policies

M-3.1 **Public Road Rights-of-Way.** Require development to reserve right-of-way for public roads and other transportation routes identified in the Mobility Element roadway network, Community Plans or Road Master Plans require the provision of sufficient right-of-way width, as specified in the County Public Road Standards, to adequately accommodate all planned users, including transit riders, pedestrians, bicyclists, and when appropriate, equestrians.

M-3.2 **Traffic Impact Mitigation.** Require development to contribute its fair share toward financing transportation facilities, including mitigating the associated direct and cumulative traffic impacts on both the local and regional road networks. Transportation facilities include road networks and related transit, pedestrian and bicycle facilities, and, when appropriate equestrian.

M-3.3 **Multiple Ingress and Egress.** Require development to provide multiple ingress/egress routes whenever feasible in conformance with State law, the Fire Code, and the Safety Element.

GOAL M-4

Safe and Compatible Roads. Roads designed to be safe for all users and compatible with their context.

Policies

M-4.1 **Walkable Village Roads.** Encourage multi-modal roads in Villages and compact residential areas with pedestrian-oriented development patterns that enhance pedestrian safety and walkability, along with other non-motorized modes of travel.

M-4.2 **Interconnected Local Roads.** Provide an interconnected and appropriately scaled local public road network in Village and Rural Villages that reinforces the compact development patterns promoted by the Land Use Element and individual community plans.

Road in Valle de Oro with bicycle and pedestrian pathways

M-4.3 **Rural Roads Compatible with Rural Character.** Design and construct public roads to meet travel demands in Semi-Rural and Rural Lands that are consistent with rural character while safely accommodating transit stops when deemed necessary, along with bicyclists, pedestrians, and equestrians.

M-4.4 **Accommodate Emergency Vehicles.** Design and construct public and private roads to allow for necessary access for fire apparatus and emergency vehicles accommodating outgoing vehicles from evacuating residents.

M-4.5 **Context Sensitive Road Design.** Design and construct roads that are compatible with the local terrain and the surrounding development context.

M-4.6 **Interjurisdictional Coordination.** Coordinate with adjacent jurisdictions so that roads within Spheres of Influence (SOIs) or that cross jurisdictional boundaries are designed to provide a consistent cross-section and capacity.

Regional Transportation Coordination and Facilities

CONTEXT

The Mobility Element addresses the County-operated multi-modal transportation network that provides a variety of mobility options within the unincorporated County. These services are provided by the County in partnership with the San Diego Association of Governments (SANDAG), Caltrans, transit agencies, the San Diego County Airport Authority, and various railroad operators.

I-15 looking north

SANDAG is the Regional Transportation Planning Authority and has responsibility for planning and allocating local, state, and federal funds for the region's transportation network. State law and the California Transportation Commission require SANDAG to adopt a 20-year regional transportation plan every four years, which considers improvements to freeways, state highways, transit, and regional bicycle and pedestrian routes. A long-range plan, the *2030 Regional Transportation Plan (RTP): Pathways for the Future* addresses countywide growth through the year 2030 and is available on the SANDAG website at: www.sandag.org/2030rtp.

The 2030 RTP identifies $4.5 billion in improvement projects for highway and regional arterials in the unincorporated County necessary to accommodate development capacity through 2030. The Mobility Element road network is based on reasonably expected revenue forecasts where $3.7 billion in funds of the $4.5 billion in requirements will be available to fund improvement projects in the unincorporated County through 2030.

State highways serve intra-county traffic and include State Routes 67, 76, 78, 79, and 125. The design of these roadways varies according to the volume of traffic they carry and ranges from freeway-style construction to two lane rural roads with at-grade intersections. Generally, these roads require a larger right-of-way so they can be expanded if future traffic volumes warrant.

In addition to the County's road network, there are other regional facilities that are critical to the movement of people and goods within unincorporated areas as well as the larger region including freight and cargo services via truck or rail, and air travel from local airports that primarily accommodate private aircraft, with limited, if any cargo service. These facilities, in conjunction with the County's extensive roadway network, provide a safe and comprehensive multi-modal mobility system for County residents, businesses, and visitors.

TRUCK ROUTES

Trucks are the primary mode used to move goods in and out of the San Diego region although rail, water transport, and air transport facilities are located in the region and contribute to this goods movement system. Commercial trucking in San Diego region primarily uses interstate and State highways as routes of travel. The SANDAG 2030 RTP identifies the major interstate highways and State routes used for commercial trucking in the San Diego region and designated truck routes in the unincorporated County include the following roadways:

- Segments of Interstates 8 and 15
- State Routes 94, 125, 188, and 905
- Otay Mesa Road

The 2030 RTP states that the potential use of managed lanes in off-peak periods will be evaluated in the near future. It also identifies other considerations for additional truck capacity that include improvements on an outer loop which includes SR 67, SR 94, and SR 125 in the unincorporated County. Generally, County roads are only used when destinations are not accessible by one of these major routes.

Semi-truck with cargo

RAIL FACILITIES

Although primarily within the incorporated cities, some rail services extend into unincorporated County areas. A freight line, the San Diego & Arizona Eastern Railway's Desert Line, is the primary rail line that traverses the unincorporated County. In addition, Burlington North–Santa Fe is the operator of a freight line that runs from Oceanside to Escondido. The Amtrak and Coaster passenger lines run along the coast through Marine Corps Base Camp Pendleton. Existing rail lines, such as the Desert Line, may be underutilized at their current capacities and the lines must remain economically feasible for continued operation and their usage maximized to provide an alternative to trucks, whenever feasible. In addition, historical abandoned rail rights-of-way exist in broken segments, some of which are in public ownership, yet are currently underutilized and should be encouraged for adaptive reuse, such as rail to trail conversions.

AIRPORTS

San Diego International Airport located in the city of San Diego, along with John Wayne Airport (Orange County), and Los Angeles International Airport (Los Angeles County) are regional airports located in Southern California that provide residents and businesses in the unincorporated County with passenger and cargo services.

Borrego Valley air field

In addition to Lindbergh Field, 11 public-use airports are located within the boundaries of the County, along with four major military aviation facilities and numerous independent airports and heliports. The County owns and operates eight of these airports, six of which are located in the unincorporated County (Agua Caliente Airstrip, Borrego Valley Airport, Fallbrook Community Airpark, Jacumba Airport, Ocotillo Airstrip, and Ramona Airport). The County also owns Gillespie Field in the City of El Cajon and McClellan-Palomar Airport in the City of Carlsbad. The remaining public-use airports include Brown Field and Montgomery Field (City of San Diego) and Oceanside Municipal Airport (City of Oceanside). These airports are shown in Figure M-1 (Airport Locations).

GOALS AND POLICIES

GOAL M-5

Safe and Efficient Multi-Modal Transportation System. A multi-modal transportation system that provides for the safe, accessible, convenient, and efficient movement of people and goods within the unincorporated County.

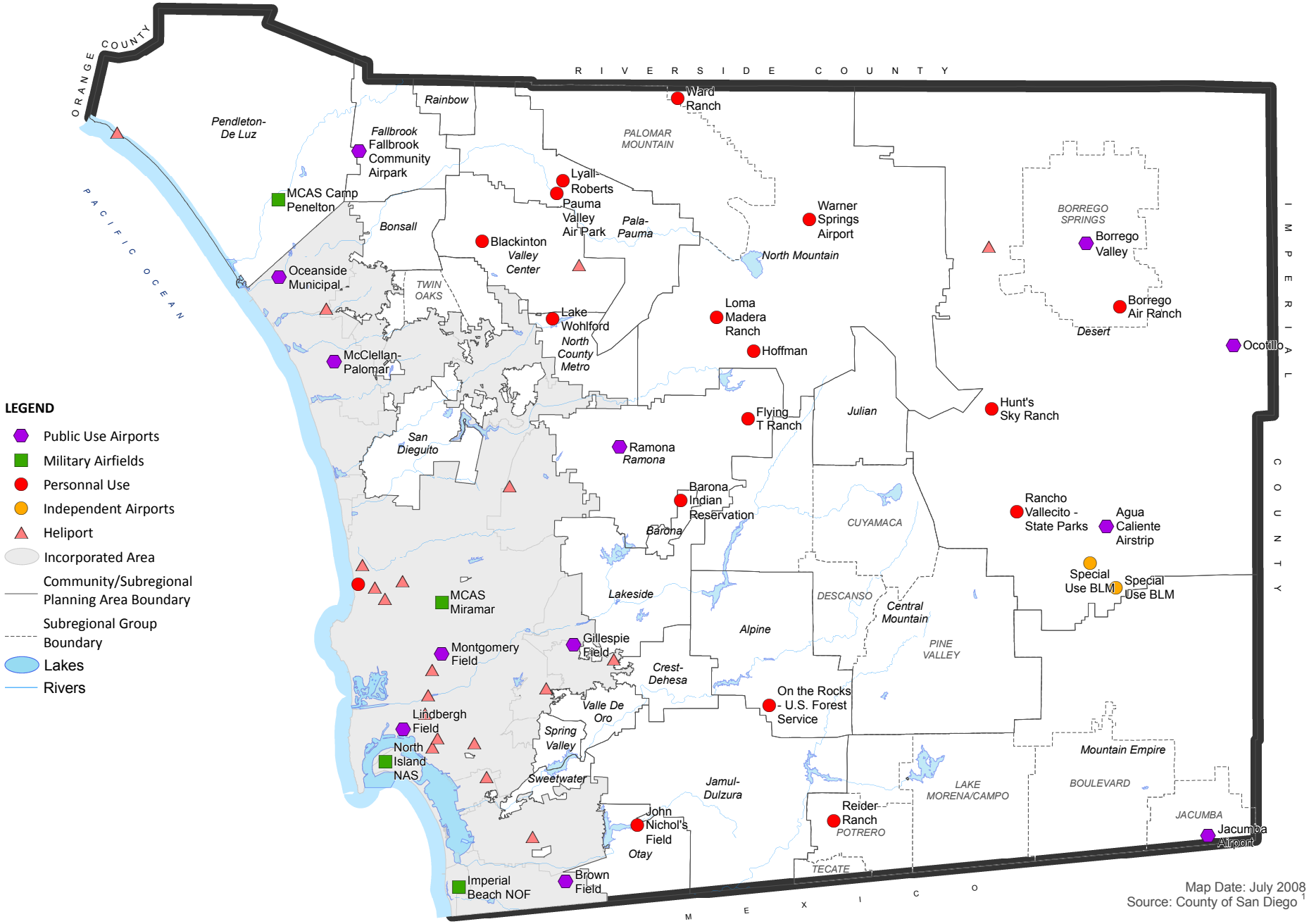
Policies


Interstate 8 east of Alpine

M-5.1 **Regional Coordination.** Coordinate with regional planning agencies, transit agencies, and adjacent jurisdictions to provide a transportation system with the following:

- Sufficient capacity consistent with the County General Plan Land Use Map
- Travel choices, including multiple routes and modes of travel to provide the opportunity for reducing vehicle miles traveled
- Facilities sited and designed to be compatible with the differing scales, intensities, and characteristics of the unincorporated communities while still accommodating regional, community, and neighborhood travel demands
- Maximized efficiency to enhance connectivity between different modes of travel

M-5.2 **Impact Mitigation for New Roadways and Improvements.** Coordinate with Caltrans to mitigate negative impacts from existing, expanded, or new State freeways or highways to reduce impacts of road improvements and/or design modifications to State facilities on adjacent communities.



AIRPORT LOCATIONS

San Diego County General Plan

Figure M-1

GOAL M-6

Efficient Freight Service Linked to Other Transportation Modes. Freight services that efficiently move goods and that are effectively linked to other transportation modes.

Policies

M-6.1 **Designated Truck Routes.** Minimize heavy truck traffic (generally more than 33,000 pounds and mostly used for long-haul purposes) near schools and within Villages and Residential Neighborhoods by designating official truck routes, establishing incompatible weight limits on roads unintended for frequent truck traffic, and carefully locating truck-intensive land uses.

M-6.2 **Existing Rail Line Use.** Support the use of existing rail lines for freight, public transit, and tourism.

M-6.3 **Visual Impacts on Scenic Corridors.** Coordinate with railroad and transit operators to ensure that infrastructure for freight and passenger service is planned and designed to limit visual impacts on scenic corridors.

Rail depot and tourist train in Campo

M-6.4 **Locate Rail Facilities in Established Communities.** Encourage railroad operators to use existing rights-of-way and locate stations and support facilities in established communities.

M-6.5 **Adaptive Reuse of Abandoned Rail Lines.** Support the retention of abandoned railroad rights-of-way and adaptation for uses that benefit the general public, such as public transit, new road connections, regional trails and bike paths, or protected habitat areas, where appropriate.

GOAL M-7

Airport Facilities. Viable and accessible airport facilities whose continuing operations effectively serve the evolving needs of the region while minimizing any adverse impacts of airport operations.

Policies

M-7.1 **Meeting Airport Needs.** Operate and improve airport facilities to meet air transportation needs in a manner that adequately considers impacts to environmental resources and surrounding communities.

Public Transit

CONTEXT

With the passage of State law (SB 1703), SANDAG became the Consolidated Transportation Services Agency (CTSA) in January 1, 2003, responsible for transit planning, programming, project development, and construction. SANDAG prepared the 2007–2011 Coordinated Plan, which provides a framework for transit

system development over the next five years and reflects the goals and direction for service development as described in the 2030 RTP. This plan also defines the level of service for transit in suburban and rural areas as follows:

- **Suburban**—Direct service along commute corridors with critical mass featuring rapid, frequent service during peaks with seamless coordinated transfers, and local service focused on smart growth areas and lifeline needs
- **Rural**—Transportation services that run only a few times a day on select days of the week (lifeline services)

Pine Valley bus stop with rural-level services

The two agencies responsible for transit operations and services in the unincorporated County areas are the Metropolitan Transit System (MTS) and the North County Transit District (NCTD). Transit services provided by these agencies include heavy and light rail, fixed-route bus service, demand-response service, and paratransit. Existing transit services for the unincorporated County consist of limited regional or local bus services, and heavy rail (the NCTD Sprinter) in one very localized area. Transit services are primarily provided to the larger, more urbanized communities, although limited services are available outside this area. In addition, tribal governments operating casinos and non-profit agencies also provide transit services for their clients and customers.

The Sprinter, operated by the North County Transit District

SANDAG has the responsibility to designate the local CTSA in adherence to and to be funded in part by the state *Transportation Development Act* (TDA). SANDAG then retains regional oversight. The CTSA works to expand the availability and use of specialized transportation services by serving as an information resource for specialized transportation providers and providing technical assistance and public outreach to increase awareness of specialized transportation options. Full Access & Coordinated Transportation, Inc. (FACT), appointed under contract by SANDAG to serve as the CTSA for the San Diego region, is a non-profit corporation formed to coordinate and consolidate transportation services to people with disabilities, senior citizens, and social service agencies.

The availability of public transit can reduce the dependency on motor vehicles and help to shape future growth patterns. Due to existing and planned development patterns, there are currently limited plans for expansion of transit service into unincorporated communities. Although transit currently comprises a small percentage of total trips in the unincorporated County, certain corridors enjoy high transit ridership. In addition, transit-supportive land uses can encourage increased transit use, and transit also is an important public service for lower income residents as well as residents with special needs including the poor, seniors, and the disabled. A primary objective of the Land Use Element is to focus development in and around existing unincorporated communities to maximize existing infrastructure, provide for efficient delivery of services, and strengthen Town Center areas while preserving the rural landscape. The development patterns of the Land Use Map are intended to facilitate the use of public transportation in Village areas.

The goals and policies in this section seek to maximize opportunities for transit ridership in Village areas while reducing congestion on roadways.

GOALS AND POLICIES

GOAL M-8

Public Transit System. A public transit system that reduces automobile dependence and serves all segments of the population.

Policies

M-8.1 **Transit Service for Transit-Dependent Populations.** Coordinate with SANDAG, the CTSA, and mass transit agencies to:

- Maximize opportunities for transit services in unincorporated communities
- Provide for transit-dependent segments of the population, such as the disabled, seniors, low income, and children, where possible
- Reserve adequate rights-of-way to accommodate existing and planned transit facilities including bus stops

M-8.2 **Transit Service to Key Community Facilities and Services.** Locate key county facilities, healthcare services, educational institutions, and other civic facilities so that they are accessible by transit in areas where transit is available.

M-8.3 **Transit Stops That Facilitate Ridership.** Locate transit stops and facilities in areas that facilitate transit ridership, and designate such locations as part of planning efforts for Town Centers, transit nodes, and large-scale commercial or residential development projects.

M-8.4 **Transit Amenities.** Require transit stops that are accessible to pedestrians and bicyclists; and provide amenities for these users' convenience.

M-8.5 **Improved Transit Facilities.** Require development projects, when appropriate, to improve existing nearby transit and/or park and ride facilities, including the provision of bicycle and pedestrian facilities, and to provide safe, convenient, and attractive pedestrian connections.

M-8.6 **Park and Ride Facilities.** Coordinate with SANDAG and tribal governments to study transit connectivity and when appropriate address improving regional opportunities for park-and-ride facilities and transit service to gaming facilities and surrounding rural areas to reduce congestion on rural roads.

M-8.7 **Inter-Regional Travel Modes.** Coordinate with SANDAG and the California High-Speed Rail Authority, where appropriate, to identify alternative methods for inter-regional travel to serve the unincorporated County residents.

Transportation System and Travel Demand Management

CONTEXT

The road network designated in the Mobility Element strives to accommodate the Land Use Map while minimizing the need to build new roads or improve existing roads. Transportation System Management seeks to optimize the transportation network, while Travel Demand Management seeks to reduce the use of the road network.

TRANSPORTATION SYSTEM MANAGEMENT (TSM)

TSM strategies focus on increasing the efficiency, safety, and capacity of existing transportation systems through strategies that relieve, lessen, or control congestion with minimal roadway widening. Techniques include performance monitoring, various types of intersection modifications, advanced technology, coordinated traffic signal timing across jurisdictional boundaries and with freeway ramps, signage and lighting upgrades, facility design treatments, high-occupancy vehicle (HOV) lanes, and targeted traffic enforcement. These strategies can reduce vehicle travel time and enhance system accessibility with little impact on other modes. Reducing traffic congestion keeps automobiles on roads designated for regional mobility, while minimizing through traffic within communities. Through better management and operation of existing transportation facilities, these techniques are designed to improve traffic flow, air quality, and movement of vehicles and goods, as well as enhance system accessibility and safety.

TRAVEL DEMAND MANAGEMENT (TDM)

TDM addresses traffic congestion by reducing travel demand rather than increasing transportation capacity. TDM programs such as employer outreach, carpool partner matching, vanpools, subsidies and/or preferred parking to rideshare participants, guarantee rides home, bicycle lockers, and other amenities for bicyclists and pedestrians including clothing lockers and shower facilities are designed to increase the efficiency of the transportation system. TDM is a key tool to reduce single-occupant-vehicle travel as well as facilitate mobility options for area residents. SANDAG manages the regional TDM program including 511, a free phone and web service that consolidates the San Diego region's transportation information into a one-stop resource. The 511 program provides up-to-the minute information on traffic conditions, incidents and driving times, schedule, route and fare information for San Diego public transportation services carpool and vanpool referrals, bicycling information and more. The County has an opportunity to facilitate the use of TDM methods by encouraging land use planning and infrastructure improvements that better accommodate pedestrians, bicyclists, and transit users. In addition, the County can also offer incentives that encourage projects to implement TDM programs.

GOALS AND POLICIES

GOAL M-9

Effective Use of Existing Transportation Network. Reduce the need to widen roads through effective use of the existing transportation network and maximizing the use of alternative modes of travel throughout the County.

Policies

M-9.1 **Transportation Systems Management.** Prior to increasing the number of road lanes, explore the provision of operational improvements that increase the effective vehicular capacity of the public road network.

M-9.2 **Transportation Demand Management.** Require large commercial and office development to use TDM programs to reduce single-occupant vehicle traffic generation, particularly during peak periods to maximize the capacity of existing or improved road facilities.

M-9.3 **Preferred Parking.** Require commercial, office, and industrial development to provide preferred parking for carpools, vanpools, electric vehicles and flex cars. [Refer also to Policy COS-16.3 (Low-Emission Vehicles) in the Conservation and Open Space Element.]

Park and ride facility at Jamacha Boulevard in Spring Valley

M-9.4 **Park-and-Ride Facilities.** Require developers of large projects to provide, or to contribute to, park-and-ride facilities near freeway interchanges and other appropriate locations that provide convenient access to congested regional arterials. Require park-and-ride facilities that are accessible to pedestrians and bicyclists, and include bicycle lockers and transit stops whenever feasible.

Parking

CONTEXT

Parking is an essential component of an efficient transportation system that includes accommodation for automobiles, motorcycles, and bicycles. Parking requirements have an ability to alter transportation choices. Providing an ample supply of free parking supports an automobile-oriented society, while downplaying transit, walkability, and safety. Yet as land becomes scarcer and construction costs increase, so do the costs of providing parking. If an insufficient number of vehicular parking spaces are provided, additional travel is required to find a parking space, causing congestion and delays. If too much vehicular parking is provided, a larger portion of the site is unnecessarily paved, causing degradation in community character and excess stormwater run-off.

The provision of a sufficient quantity of bicycle parking, that is both secure and convenient, will contribute to increased bicycle usage. In addition, a multi-modal transportation network that reduces the reliance on single-occupant vehicles reduces the number of parking spaces needed.

Parking in a commercial area in Fallbrook

Parking spaces are either provided on the street or within a project site as parking lots. Parking regulations address off-street parking in an effort to provide functionally adequate, safe, convenient, and aesthetically pleasing parking and loading facilities for motor vehicles. On-street parking is allowed within the road shoulder, unless the County imposes a parking prohibition. If a parking prohibition is in place, the shoulder is available for use as a bike facility.

GOALS AND POLICIES

GOAL M-10

Parking for Community Needs. Parking regulations that serve community needs and enhance community character.

Policies

M-10.1 **Parking Capacity.** Require new development to:

- Provide sufficient parking capacity for motor vehicles consistent with the project's location, use, and intensity
- Provide parking facilities for motorcycles and bicycles

M-10.2 **Parking for Pedestrian Activity.** Require the design and placement of on-site automobile, motorcycle, and bicycle parking in Villages and Rural Villages that encourages pedestrian activity.

M-10.3 **Parking for Pedestrian Activity.** Require development to maximize the use of on-street parking to contribute to meeting overall parking requirements, while ensuring that traffic operations and pedestrian safety are not compromised.

M-10.4 **Shared Parking.** Develop Town Center plans that incorporate on-street and shared vehicular parking facilities to reduce on-site parking requirements.

M-10.5 **Reduced Parking.** Accommodate appropriate reductions in on-site parking requirements in situations such as:

- Development of low-income, senior, and affordable housing
- Development located near transit nodes

Transportation Demand Management programs are described in the previous section.

- Employment centers that institute Transportation Demand Management programs
- Development that integrates other parking demand reductions techniques such as parking cash out

M-10.6 **On-Street Parking.** Minimize on-street vehicular parking outside Villages and Rural Villages where on-street parking is not needed, to reduce the width of paved shoulders and provide an opportunity for bicycle lanes to retain rural character in low-intensity areas. Where on-street parking occurs outside Villages and Rural Villages, require the design to be consistent with the rural character.

M-10.7 **Parking Area Design for Stormwater Runoff.** Require that parking areas be designed to reduce pollutant discharge and stormwater runoff through site design techniques such as permeable paving, landscaped infiltration areas, and unpaved but reinforced overflow parking areas that increase infiltration.

Bicycle, Pedestrian, and Trail Facilities

CONTEXT

The Mobility Element recognizes that a well planned and designed multi-modal road network, complete with non-motorized travel options that include bicycle and pedestrian facilities as well as hiking, horseback riding, and mountain biking trails and pathways, offers an important alternative to motor-vehicle use. Walking, bicycling, and to a lesser extent horseback riding, provide non-polluting forms of transportation while improving health through exercise. These modes of travel also reduce traffic congestion, dependency on motorized vehicles, roadway noise, and air pollution. A safe and enjoyable bicycling or pedestrian experience encourages more people to walk or bicycle rather than drive their vehicles.

The San Diego Regional Bicycle Plan, prepared by SANDAG, seeks to encourage development of a unified regional bicycle system that will serve the needs of bicycle riders by identifying the best ways to provide connections to local and regional activity centers, transit facilities, and regional trail systems. The County's Bicycle Transportation Plan is coordinated with the regional plan and guides the development and maintenance of a bicycle network, support facilities, and other programs for the unincorporated portions of the County.

Bike path in the Sweetwater Regional Park

In addition to on-road bicycle paths, the County Trails Program provides an extensive trails system that supplements the road network as an alternative off-road travel mode for some County residents. Trails are primarily designed for the purpose of recreation and significantly enhancing the quality of life and health benefits associated with walking, hiking, mountain biking, and horseback riding throughout the County's varied environments. Most of the existing trails are in the mountains and deserts, with far fewer trails located near urban and suburban communities. The more

urban and populated communities have few accessible trails (although sidewalks are more common). Additional trails are needed closer to population centers in the western portion of the County to provide residents with convenient access and opportunities to enjoy the recreational, health and transportation benefits associated with these facilities. The two types of regional trail facilities are identified below.

- *Trails,* typically located away from vehicular roads, are primarily recreational in nature but can also serve as an alternative mode of transportation. They are soft-surface facilities for single or multiple uses by pedestrians, equestrians, and mountain bicyclists. Trail characteristics vary depending on location and user types.
- *Pathways* are facilities located within a parkway or road right-of-way. A riding and hiking trail located in the road right-of-way is considered a pathway. They are typically soft-surfaced facilities intended to serve both circulation and recreation purposes. Pathways help make critical connections and are an integral part of a functional trail system.


Pine Valley trail

A regional trails map is included as Figure M-2 (Regional Trails), which identifies approved general alignment corridors for regional trails in the San Diego region. In addition, regional trails are shown on the community level maps in Figure M-A-1 through Figure M-A-24 of the Mobility Element Network Appendix. These trails have characteristics and conditions that serve a regional function by covering long linear distances, transcending community and/or municipal borders, having state or national significance, or providing important connections to existing parks, open space preserves, and other public lands. Additional existing trail segments and proposed reroutes for portions of some of the regional trails are identified in the Community Trails Master Plan (CTMP), the implementation tool for the County Trails Program.

GOALS AND POLICIES

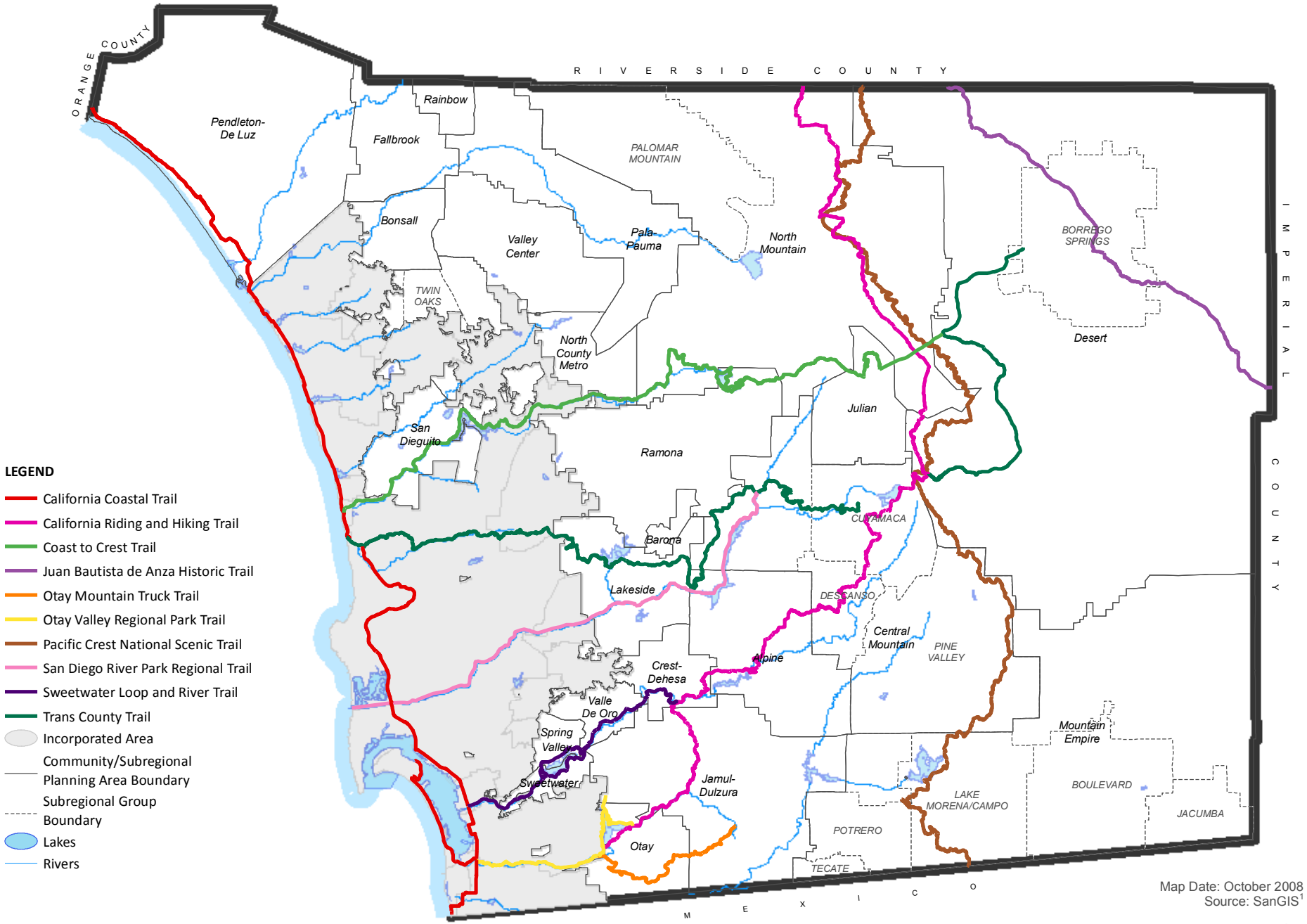
GOAL M-11

Bicycle and Pedestrian Facilities. Bicycle and pedestrian networks and facilities that provide safe, efficient, and attractive mobility options as well as recreational opportunities for County residents.

Policies

M-11.1 **Bicycle Facility Design.** Support regional and community-scaled planning of pedestrian and bicycle networks.

M-11.2 **Bicycle and Pedestrian Facilities in Development.** Require development and Town Center plans in Villages and Rural Villages to incorporate alternate modes of transportation, such as comprehensive bicycle and pedestrian networks, including both on-street facilities as well as off-street trails, to safely serve the full range of intended users.



REGIONAL TRAILS

San Diego County General Plan

Figure M-2

M-11.3 **Bicycle Facilities on Roads Designated in the Mobility Element.** Maximize the provision of bicycle facilities on County Mobility Element roads in Semi-Rural and Rural Lands to provide a safe and continuous bicycle network in rural areas that can be used for recreation or transportation purposes, while retaining rural character.

Bike lane in shoulder of Old Highway 80 in the Central Mountain subregion

M-11.4 **Bicycle Network Connectivity.** Require residential and commercial development in Villages and Rural Villages provide comprehensive internal pedestrian and bicycle networks that connect to existing or planned adjacent community and countywide networks.

M-11.5 **Funding for Bicycle Network Improvements.** Seek outside funding opportunities for bicycle and pedestrian network improvement projects, particularly those that provide safe and continuous pedestrian and bicycle routes to schools, town centers, parks, park-and-ride facilities, and major transit stops.

M-11.6 **Coordination for Bicycle and Pedestrian Facility Connectivity.** Coordinate with Caltrans to provide alternate connections for past, existing, or planned bicycle and pedestrian routes that were or would be severed by State freeway and highway projects that intersect pathways or divide communities.

M-11.7 **Bicycle and Pedestrian Facility Design.** Promote pedestrian and bicycle facility standards for facility design that are tailored to a variety of urban and rural contexts according to their location within or outside a Village or Rural Village.

M-11.8 **Coordination with the County Trails Program.** Coordinate the bicycle and pedestrian network and facilities with the Community Trails Master Plan proposed trails and pathways.

GOAL M-12

County Trails Program. A safe, scenic, interconnected, and enjoyable non-motorized multi-use trail system developed, managed, and maintained according to the County Trails Program, Regional Trails Plan, and the Community Trails Master Plan.

Policies

M-12.1 **County Trails System.** Implement a County Trails Program in accordance with the proposed trail alignments and goals and policies identified in the Community Trails Master Plan.

M-12.2 **Trail Variety.** Provide and expand the variety of trail experiences that provide opportunities to all residents of the unincorporated County, including urban/suburban, rural, wilderness, multi-use, staging areas, and support facilities.

M-12.3 **Trail Planning.** Encourage trail planning, acquisition, development, and management with appropriate jurisdictions.

M-12.4 **Land Dedication for Trails.** Require development projects to dedicate and improve trails or pathways where the development will occur on land planned for trail or pathway segments shown on the Regional Trails Plan or Community Trails Master Plan.

M-12.5 **Future Trails.** Maximize opportunities to designate or construct future trails on County-owned lands, lands within the Multiple Species Conservation Program (MSCP), or other lands already under public ownership or proposed for public acquisition.

M-12.6 **Trail Easements, Dedications, and Joint-Use Agreements.** Promote trail opportunities by obtaining easements, dedications, license agreements, or joint-use agreements from other government agencies and public and semi-public agencies.

M-12.7 **Funding for Trails.** Seek funding opportunities for trail acquisition, implementation, maintenance and operation.

M-12.8 **Trails on Private Lands.** Maximize opportunities that are fair and reasonable to secure trail routes across private property, agricultural and grazing lands, from willing property owners.

M-12.9 **Environmental and Agricultural Resources.** Site and design specific trail segments to minimize impacts to sensitive environmental resources and agricultural lands.

San Dieguito Trail

M-12.10 **Recreational and Educational Resources.** Design trail routes that meet a public need and highlight the County's recreational and educational resources, including natural, scenic, cultural, and historic resources.

Background Material

Level of Service

Level of service (LOS), a qualitative measure describing operational conditions within a traffic stream and the motorists' perceptions of those conditions, provides a measure of how well a road is able to meet the demands or volume of traffic. The capacity threshold of a road is the maximum number of vehicles that can traverse a uniform section of road within a specified timeframe. Road capacity for County roads is measured according to average daily traffic (ADT), while State facilities are measured according to Caltrans criteria based on peak-hour volumes that a roadway could accommodate.

Six LOS capacity thresholds are defined for each type of roadway, with letters A through F used to establish the LOS measure. Criteria for each LOS threshold include: speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. For example, LOS A represents free flow, almost complete freedom to maneuver within the traffic stream. LOS F represents forced flow where more vehicles are attempting to use the road facility than can be served resulting in stop and go traffic. The table below provides definitions for the various LOS categories based upon typical peak traffic periods. The standard adopted by the Board of Supervisors for the LOS on Mobility Element roads is LOS D.

SANDAG is responsible for monitoring the performance of a Congestion Management Plan (CMP) roadway system, which includes selected freeways, state highways, and regional arterials in the County, including the unincorporated areas. In instances when there is a decline in the system’s performance or when performance standards are not met, then certain remedial actions are required. The CMP helps cities and communities monitor transportation system performance, develop programs to address near- and long-term congestion, and better integrate land use and transportation planning decisions.

Level of Service Descriptions	
LOS	Description
A	This LOS represents a completely free-flow conditions, where the operation of vehicles is virtually unaffected by the presence of other vehicles and only constrained by the geometric features of the highway and by driver preferences.
B	This LOS represents a relatively free-flow condition, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.
C	At this LOS the influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is clearly affected by other vehicles.
D	At this LOS, the ability to maneuver is notably restricted due to traffic congestion, and only minor disruptions can be absorbed without extensive queues forming and the service deteriorating.
E	This LOS represents operations at or near capacity. LOS E is an unstable level, with vehicles operating with minimum spacing for maintaining uniform flow. At LOS E, disruptions can not be dissipated readily thus causing deterioration down to LOS F.
F	At this LOS, forced or breakdown of traffic flow occurs, although operations appear to be at capacity, queues forms behind these breakdowns. Operations within queues are highly unstable, with vehicles experiencing brief periods of movement followed by stoppages.

SOURCE: Highway Capacity Manual, 2000

The LOS for operating on State highways is based upon Measures of Effectiveness (MOE) identified in the Highway Capacity Manual (HCM). Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D. If an existing State highway facility is operating at less than this target LOS, the existing MOE should be maintained.

ROADS WHERE A LOWER LEVEL OF SERVICE IS DEEMED ACCEPTABLE

Roads Where a Lower Level of Service Is Deemed Acceptable			
Road	**Classification**	**From**	**To**
State Highways[a]			
SR 76[b]	4.1A Major Road w/Raised Median	S. Mission Rd. (Bonsall)	Gird Rd. (Fallbrook)
	6.2 Prime Arterial	San Marcos city limits (Bonsall)	S. Mission Rd. (Bonsall)
SR 78[b]	Freeway	Vista city limits (NC Metro)	San Marcos city limits (NC Metro)
SR 94	2.1D Community Collector w/ Improvement Options	Melody Ln. (Jamul)	Otay Lakes Rd. (Jamul)
County CE Roads			
Old Hwy 395	2.1D Community Collector w/ Improvement Options	5th St. (Rainbow)	Pala Mesa Dr. (Fallbrook)
	2.1D Community Collector w/ Improvement Options	Pala Rd. (Fallbrook)	I-15 interchange (Bonsall)
De Luz Rd.	2.2C Light Collector w/ Intermittent Turn Lanes	Shady Ln. (Fallbrook)	W. Mission Rd. (Fallbrook)
E. Fallbrook St.	2.2B Light Collector w/ Continuous Turn Lane	S. Main Ave. (Fallbrook)	Morro Rd. (Fallbrook)

Roads Where a Lower Level of Service Is Deemed Acceptable			
Road	**Classification**	**From**	**To**
E. Alvarado St.	2.2C Light Collector w/ Intermittent Turn Lanes	N. Main Ave. (Fallbrook)	Brandon Rd. (Fallbrook)
W. Mission Rd.	2.2B Light Collector w/ Continuous Turn Lane	De Luz Rd. (Fallbrook)	Brandon Rd. (Fallbrook)
S. Mission Rd.	4.1A Major Road w/ Raised Median	Via Monserate Dr. (Fallbrook)	SR 76 Pala Rd. (Bonsall)
Mountain Meadow Rd.	4.1B Major Road w/ Intermittent Turn Lanes	I-15 interchange (NC Metro)	Hidden Meadows Rd. (NC Metro)
Mirar de Valle Rd.	2.1A Community Collector w/ Raised Median	North Broadway (NC Metro)	New North-South Rd. (Valley Center)
Camino del Norte	2.2F Light Collector w/ Reduced Shoulder	Aliso Canyon Rd. (San Dieguito)	Del Dios Hwy. (San Dieguito)
	6.2 Prime Arterial	Camino San Bernardo (San Dieguito)	San Diego city limits (San Dieguito)
Del Dios Hwy.	2.1D Community Collector w/ Improvement Options	Camino del Norte (San Dieguito)	Escondido city limits (San Dieguito)
Via de la Valle	2.1A Community Collector w/ Raised Median	El Camino Real (San Dieguito)	Paseo Delicias (San Dieguito)
San Dieguito Rd.	2.1A Community Collector w/ Raised Median	El Apajo Rd. (San Dieguito)	San Diego city limits (San Dieguito)
La Bajada/ La Granada	2.2F Light Collector w/ Reduced Shoulder	Encinitas city limits (San Dieguito)	Paseo Delicias (San Dieguito)
Linea del Cielo	2.2F Light Collector w/ Reduced Shoulder	El Camino Real (San Dieguito)	Rambla de las Flores (San Dieguito)
Valley Center Rd.	4.2A Boulevard w/ Raised Median	Lilac Rd. (Valley Center)	New North-South LPR (Valley Center)
	2.1D Community Collector w/ Improvement Options	High Point Dr. (Valley Center)	Mac Tan Rd. (Valley Center)
New East-West Rd.	2.2C Light Collector w/ Intermittent Turn Lanes	Old Hwy. 395 (Valley Center)	Covey Lane (Valley Center)
Alpine Blvd.	2.2A Light Collector w/ Raised Median	Tavern Rd. (Alpine)	East Victoria Rd. (Alpine)
West Willows Rd.	2.2C Light Collector w/ Intermittent Turn Lanes	I-8 interchange (Alpine)	Viejas Grade Rd. (Alpine)
Pomerado Rd.	4.1A Major Road w/ Raised Median	I-15 interchange (County Islands)	San Diego city limits (County Islands)
Lyons Valley Rd.	2.1D Light Collector w/ Improvement Options	SR 94 (Jamul)	Skyline Truck Trail (Jamul)

Roads Where a Lower Level of Service Is Deemed Acceptable			
Road	**Classification**	**From**	**To**
Wildcat Canyon Rd.	2.1D Light Collector w/ Improvement Options	Willow Rd. (Lakeside)	Barona Casino (Barona)
Julian Ave.	2.2C Light Collector w/ Intermittent Turn Lanes	Lemoncrest Dr. (Lakeside)	Lakeview Rd. (Lakeside)
Riverside Dr.	4.1B Major Road w/ Intermittent Turn Lanes	Riverford Rd. (Lakeside)	Palm Row Dr. (Lakeside)
Los Coches Rd.	2.1D Light Collector w/ Improvement Options	Via Diego (Lakeside)	Old Hwy. 80 (Lakeside)
7th Street	2.2E Light Collector	Elm St. (Ramona)	G St. (Ramona)
Jamacha Blvd.	4.1A Major Road w/ Raised Median	Worthington St. (Spring Valley)	Kempton St. (Spring Valley)
		Point Pkwy. (Spring Valley)	Sweetwater Springs (Spring Valley)
Jamacha Rd.	6.2 Prime Arterial	SR 94 (Valle de Oro)	Fury Ln. (Valle de Oro)
Apple St.	2.2E Light Collector	Grand Ave. (Spring Valley)	Maya St. (Spring Valley)
Fuerte Dr.	2.2E Light Collector	I-8 interchange (Valle de Oro)	Avacado Blvd. (Valle de Oro)
Kenwood Dr.	2.2D Light Collector w/ Improvement Options	Andreen St. (Spring Valley)	SR 94 (Spring Valley/VDO)
	4.1B Major Road w/ Intermittent Turn Lanes	SR 94 (Spring Valley / VDO)	Campo Rd. (Valle de Oro)
Sweetwater Rd.	2.1A Community Collector w/ Raised Median	Willow St. (Sweetwater)	Winnetka Dr. (Sweetwater)
Central Ave.	2.2B Light Collector w/ Continuous Turn Lane	Sweetwater Rd. (Sweetwater)	Frisbie St. (Sweetwater)

a. The cross-sections for State Highway reflect the design in the Project Authorization/Environmental Document (PA/ED), which are different from those of the County Mobility Element road classifications.

b. Roads noted are on the Congestion Management Program (CMP). Acceptable LOS for roads on the CMP is LOS E or better.

Note: Table may need to be modified upon adoption of the Mobility Element network